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Census File Number

Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997

INSTRUCTIONS

1. General – The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in item 18B. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies which are not listed, describe and report them in the "Cost of all other materials . . ." line at the end of this section. If you consumed less than \$25,000 of a listed material, include the value with "Cost of all other materials . . .," Census material code 970099 8.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

2. Valuation of Materials Consumed – The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amounts actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

3. Contract Work – Include as materials consumed those you purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in item 10, line e, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract or on commission should be excluded.

4. Resales – Cost for products bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in item 10, line b, not in item 17 below. The value of these products shipped by this establishment should be reported in item 18B under Census product code 99989 00 6, "Resales."

5. Produced and Consumed – Forgings, foundries, and screw machine products – Report the quantities produced and used in manufacturing other products made in this establishment in item 19. Note that the materials used to produce these items should be reported in item 17.

Line No.	Materials, parts, and supplies		Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
				Cost, including delivery cost (freight-in)		
	(A)		571 (B)	574 (E)	Thou-	Dollars
				Millions	sands	
1	FLUID POWER PRODUCTS (Hydraulic and pneumatic)	Pumps, motors, and hydrostatic transmissions	359412 4	\$		
2		Cylinders and rotary actuators	359301 9			
3		Filters	356921 7			
4		Hose or tube fittings and assemblies	349261 8			
5		Valves	349271 7			
6	FABRICATED METAL PRODUCTS (Except forgings)	Bolts, nuts, screws, washers, rivets, and screw machine products	345001 2			
7		Metal stampings	346901 2			
8		Metal tanks, heat exchangers, steam condensers, and other boiler products, fabricated steel plate, and weldments	344301 7			
9		Fabricated structural metal products	344001 3			
10		Other fabricated metal products	340089 2			
11	FORGINGS	Iron and steel	346200 9			
12		Nonferrous	346300 7			
13	CASTINGS (Rough and semifinished)	Iron and steel	332001 7			
14		Aluminum and aluminum-base alloy	336005 4			
15		Other nonferrous	336003 9			

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Item 17. CONSUMPTION OF SELECTED MATERIALS DURING 1997 – Continued							
Line No.	Materials, parts, and supplies			Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
					Cost, including delivery cost (freight-in)		
	(A)	(B)	(E)				
				571	574	Thousands	Dollars
16	Shapes and Forms (Except castings, forgings, and fabricated metal products)	STEEL	Bars, bar shapes, and plates	331007 5	\$		
17			Sheet and strip	331022 4			
18			All other	331034 9			
19		Nonferrous	336002 1				
20	Pistons, piston rings, carburetors, valves (intake and exhaust only)			359225 0			
21	Engine electrical equipment (spark plugs, magnetos, generators, starters, etc.)			369401 5			
22	Integral horsepower electric motors and generators (1 hp and larger)			362120 8			
23	BEARINGS (Mounted and unmounted)	Ball		356218 8			
24		Roller		356201 4			
25	Plain bearings and bushings			356810 2			
26	Speed changers, gears, and industrial high-speed drives			356601 5			
27	Turbines purchased for incorporation into turbine generator sets			351101 1			
28	Generators purchased for incorporation into turbine generator sets			351102 9			
29	Gaskets, all types, and asbestos packing			305300 6			
30	Fabricated plastics products (except gaskets)			308006 6			
31	Rubber and plastics hose and belting			305201 6			
32	Cutting tools for machine tools			354501 9			
33	Cost of all other materials and components, parts, containers, and supplies consumed			970099 8			
	Describe the principal materials, etc., included in this value.						
34	TOTAL Sum of lines 1–33 should equal item 10, line a				\$		

CONTINUE WITH ITEM 18A ON PAGE 7

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued							
Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports (A)		Census product code 581(B)	Products shipped and other receipts			
				Value, f.o.b. plant (E)			
				584Millions	Thou-sands	Dollars	
13	Gasoline and gas-gasoline engines (except aircraft, automobile, highway truck, bus, tank, and outboard marine)(corresponds to the sum of the item codes 9101–9207 as reported on CIR Form MA35L, Internal Combustion Engines, for 1997) (35191)*		35191 00 6	\$			
14	Diesel, semidiesel, and dual-fuel engines (except automobile, highway truck, bus, and tank)(corresponds to the sum of item codes 9331–9353 as reported on CIR Form MA35L, Internal Combustion Engines, for 1997) (35193)*		35193 00 2				
15	Diesel, semidiesel, and dual-fuel engines for automobiles, highway trucks, and buses (corresponds to the sum of item codes 9410–9425 as reported on CIR Form MA35L, Internal Combustion Engines, for 1997) (35194)*		35194 00 0				
16	Outboard motors (internal combustion) (35195)		35195 00 7				
17	Piston-type natural gas engines (including LPG engines; excluding gas turbines) (corresponds to the sum of item codes 9611–9612 as reported on CIR Form MA35L, Internal Combustion Engines, for 1997) (35196)*		35196 00 5				
18	TANK (Except gas turbine) AND CONVERTED INTERNAL COMBUS-TION ENGINES (35197)	Tank engines (except gas turbines)	35197 21 9				
19		Converted engines (basic engines, short blocks purchased from another company or received from other plants of the same company and converted to marine or other uses)	35197 51 6				
20	Parts and Accessories for Internal Combustion Engines (Except aircraft and gasoline automotive engines and gas turbines) (35199) (Report parts for gasoline automotive engines on lines 42-63)	Connecting rods	35199 01 7				
21		Crankshafts, engine	35199 08 2				
22		Camshafts, engine	35199 09 0				
23		Flywheels	35199 21 5				
24		ENGINE BEARINGS (Halves)	Main (crankshaft)	35199 24 9			
25			Connecting rod	35199 25 6			
26			Other (camshaft, balance shaft, etc.)	35199 33 0			
27		ENGINE PUMPS, NEW	Oil	35199 27 2			
28			Fuel	35199 31 4			
29			Water	35199 32 2			
30		Engine blocks	35199 35 5				
31		Cylinder liners (sleeves)	35199 39 7				
32		Cylinder heads	35199 49 6				
33		Intake manifolds and exhaust manifolds	35199 63 7				
34		Valve guides, seats, and tappets	35199 67 8				
35		Rocker arms and parts	35199 71 0				
36		Fuel injection systems (multipoint)	35199 75 1				
37		Governors, engine speed	35199 83 5				
38		Radiators, stationary engine	35199 87 6				
39		Superchargers (including turbochargers)	35199 91 8				
40	Other parts and accessories – Specify kind						
			35199 99 1				
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Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued

Line No.	Products and services		Census product code	Products shipped and other receipts		
				Value, f.o.b. plant (E)		
	(A)		581 (B)	584 Millions	Thou-sands	Dollars
41	Gasoline Engines and Gasoline Engine Parts for Motor Vehicles, New (37142)	Gasoline engines, new (with or without cylinder heads, fuel pumps, water pumps, and other standard accessories)		37142 01 5	\$	
42		Intake manifolds		37142 06 4		
43		Exhaust manifolds		37142 07 2		
44		Crankshafts, engine		37142 08 0		
45		Camshafts, engine		37142 09 8		
46		Rocker arms and parts		37142 15 5		
47		Valve guides, seats, and tappets		37142 16 3		
48		Fuel injection systems		37142 18 9		
49		Flywheels and flexplates		37142 17 1		
50		Timing gears, sprockets, and chains		37142 22 1		
51		ENGINE BEARINGS (Halves)	Main	37142 24 7		
52			Connecting rod	37142 25 4		
53			Other (balance shaft, camshaft, etc.)	37142 26 2		
54		OIL PUMPS, NEW	Engine	37142 27 0		
55			Power steering	37142 28 8		
56		Fuel pump assemblies (excluding kits)		37142 31 2		
57		Water pump assemblies (excluding kits)		37142 32 0		
58		Engine cooling fans (including hubs and clutches)		37142 34 6		
59		Radiators, complete		37142 35 3		
60		Radiator shells and cores		37142 36 1		
61		Thermostats (engine cooling systems)		37142 37 9		
62		PCV (positive crankcase ventilation) valves		37142 41 1		
63		All other parts and accessories for gasoline automotive engines		37142 49 4		
64	Carburetors, All Types (35921)	NEW	For motor vehicle engines (passenger car, truck, and bus)	35921 01 4		
65			All other carburetors	35921 02 2		
66		Rebuilt carburetors, all types		35921 03 0		
67		Parts for carburetors (excluding gaskets and screw machine products)		35921 05 5		
68	PISTONS, ALL TYPES (Machined) (Do not report rough castings)	For motor vehicle engines (passenger car, truck, and bus)		35922 01 2		
69		All other pistons		35922 02 0		

CONTINUE WITH ITEM 18B ON PAGE 10

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued							
Line No.	Products and services			Census product code	Products shipped and other receipts		
					Value, f.o.b. plant (E)		
	581	(B)	584	Millions	Thou- sands	Dollars	
70	Piston Rings, All Types, and Piston Pins	OIL TYPE	For motor vehicle engines (passenger car, truck, and bus)	35922 03 8	\$		
71			All other oil type piston rings	35922 04 6			
72		COMPRES- SION TYPE	For motor vehicle engines (passenger car, truck, and bus)	35922 05 3			
73			All other compression type piston rings	35922 06 1			
74		Piston pins	35922 09 5				
75	VALVES (Intake and exhaust only) (35923)	For motor vehicle engines (passenger car, truck, and bus)		35923 01 0			
76		All other valves		35923 02 8			
77	Ignition Harness and Cable Sets (36941)	IGNITION HARNESS SETS	Automotive type	36941 01 1			
78			Other (including tractor, stationary engine, and aircraft)	36941 02 9			
79		CABLE SETS	Automotive type	36941 03 7			
80			Aircraft and other types	36941 04 5			
81	Battery Charging Alternators, Generators, and Regulators (36942)	BATTERY CHARGING ALTERNATORS AND GENERATORS FOR INTERNAL COMBUSTION ENGINES	Automotive type, new	36942 01 9			
82			Other types, new	36942 02 7			
83			Rebuilt, all types	36942 03 5			
84		Regulators for battery charging alternators and generators (new and rebuilt)	36942 04 3				
85	STARTING (ENGINE CRANKING) MOTORS (36943)	Automotive types, new		36943 01 7			
86		Other types, new		36943 02 5			
87		Rebuilt, all types		36943 03 3			
88	Spark plugs (all types) (36944)			36944 00 7			
89	OTHER COMPLETE ELECTRICAL AND ELECTRONIC EQUIPMENT FOR INTERNAL COMBUSTION ENGINES (36947)	Ignition coils (all types)		36947 01 8			
90		Distributors (all types)		36947 02 6			
91		Magnetos, magneto-dynamos, and magnetic flywheels		36947 04 2			
92		Other complete ignition equipment (including electronic ignitions)		36947 05 9			
93		Electronic systems for complete engine control, using computers or microprocessors		36947 11 7			
94		Other complete electrical and/or electronic equipment for internal combustion engines, except computers and microprocessors (including complete engine control equipment)		36947 19 0			
95	Parts for Engine Electrical and/or Electronic Equipment (36949)	Armatures, field coils, and drive-end housings for cranking motors		36949 01 4			
96		Armatures and field coils for alternators and generators		36949 07 1			
97		PARTS FOR IGNITION DISTRIBUTORS	Distributor heads and rotors	36949 11 3			
98			Breaker point sets	36949 12 1			
99			Condensers (capacitors)	36949 13 9			
100		Other parts for engine electrical and/or electronic equipment – Specify kind		36949 19 6			

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Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued							
Line No.	Products and services *Item corresponds to products reported on Current Industrial Reports (A)			Census product code 581 (B)	Products shipped and other receipts		
					Value, f.o.b. plant (E)		
					584 Millions	Thou-sands	Dollars
101	Filters for Internal Combustion Engines, New (37144)	OIL	Light duty (car and light truck)	37144 01 1	\$		
102			Heavy duty	37144 02 9			
103		FUEL	Light duty (car and light truck)	37144 04 5			
104			Heavy duty	37144 05 2			
105		AIR	Light duty (car and light truck)	37144 07 8			
106			Heavy duty	37144 08 6			
107		Other (including coolant and hydraulic)		37144 09 4			
108	Drive Train Components, New (Except wheels and brakes) (37146)	TRANS-MISSIONS (Except auxiliary and parts) (Report trans-axles on line 112.)	Heavy truck and bus type: <ul style="list-style-type: none">Manual	37146 13 1			
109			<ul style="list-style-type: none">Automatic	37146 15 6			
110			Parts for manual transmissions	37146 23 0			
111			Parts for automatic transmissions	37146 25 5			
112		Transaxles		37146 28 9			
113	Industrial pumps (except hydraulic fluid power pumps, automotive circulating pumps, and measuring and dispensing pumps; including value of the driver if shipped as a complete unit)(corresponds to the sum of survey item codes 1098–1298 on CIR Form MA35P, Pumps, Except Hydraulic, and Compressors, for 1997) (35612)*			35612 00 1			
114	Parts and attachments for pumps and pumping equipment (except for hydraulic fluid power, and air and gas compressors) (corresponds to the sum of survey item codes 1911–1995 on CIR Form MA35P, Pumps, Except Hydraulic, and Compressors, for 1997) (35616)*			35619 00 6			
115	Air and gas compressors (except compressors for ice making equipment, refrigeration equipment, air-conditioning equipment, and pneumatic air motors; including the value of the driver if shipped as a complete unit)(corresponds to the sum of survey item codes 3298–3388 on CIR Form MA35P, Pumps, Except Hydraulic, and Compressors, for 1997) (35633)*			35633 00 7			
116	Parts and attachments for air and gas compressors (corresponds to item code 3900 on CIR Form MA35P, Pumps, Except Hydraulic, and Compressors, for 1997) (except for refrigeration, ice making, and air-conditioning equipment) (35632)*			35632 00 9			
117	Prime mover generator sets (except steam or hydraulic turbine)(corresponds to the sum of item codes 7401–7475 as reported on CIR Form MA36H, Motors and Generators, for 1997) (36214)*			36214 00 5			
118	Parts and supplies for motors, generators, and motor-generator sets (corresponds to the sum of item codes 8590, 8591, and 8595 as reported on CIR Form MA36H, Motors and Generators, for 1997) (36219)*			36219 00 4			
119	AIRCRAFT ENGINES	Military engines (for U.S. military aircraft and any other aircraft built to military specifications) (37241)		37241 00 7			
120		For civilian aircraft (corresponds to the sum of item codes 4201–4214 on CIR Form MA37G, Complete Aircraft and Aircraft Engines, for 1997) (37242)*		37242 00 5			
121	Aircraft Engine Parts and Accessories (37244)	MILITARY	For spark ignition reciprocating or rotary internal combustion engines	37244 01 9			
122			For other engines	37244 02 7			
123		CIVILIAN	For spark ignition reciprocating or rotary internal combustion engines	37244 05 0			
124			For other engines	37244 06 8			
CONTINUE WITH ITEM 18B ON PAGE 12							

Item 18B. PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1997 – Continued						
Line No.	Products and services (A)		Census product code	Products shipped and other receipts		
			581	Value, f.o.b. plant (E)		
				584	Millions	Thou- sands
			(B)			
125 126 127 128 129 130 131 132 133	ALL OTHER PRODUCTS MADE IN THIS ESTABLISH- MENT	Describe and report separately each product with a sales value of \$50,000 or more which cannot be assigned to one of the lines above. Specify unit of measure for quantity.				
			18	\$		
			26			
			34			
			42			
			59			
			67			
			75			
			83			
			91			
		134	CONTRACT WORK	Receipts for work done for others on their own materials Describe below products worked on and kind of work.	93000 00 8	
135	MISCELLA- NEOUS RECEIPTS	Sales of scrap and refuse	99980 13 8			
136		Receipts for installation or construction	99980 31 0			
137		Receipts for maintenance contracts	99980 35 1			
138		Receipts for research and developmental work	99980 41 9			
139		Receipts for repair work	99980 61 7			
140		Other miscellaneous receipts	99980 98 9			
141	RESALES	Sales of products bought and sold without further manufacture, processing, or assembly in this establishment. The cost of such items should be reported in item 10, line b.	99989 00 6			
142	TOTAL value of shipments and other receipts Sum of lines 1–141, column (E)		77000 00 8	\$		

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Item 19. SELECTED PRODUCTS PRODUCED IN THIS ESTABLISHMENT AND USED IN MANUFACTURING OTHER PRODUCTS MADE IN THIS ESTABLISHMENT

INSTRUCTIONS

1. Report below the quantity of each listed item produced in this establishment and used in manufacturing other products made in this establishment.

2. Purchases or receipts of the items specified below should be reported only in item 17.

3. Materials used to produce the items specified below should be reported in item 17.

4. Quantities produced for sale as such and not for incorporation in other products should be reported in item 18B.

5. Report quantities in the unit of measure specified in column (D).

Line No.	Item	Census code	Was this operation performed at this establishment during 1997?		Unit of measure for quantities	Quantities produced in this establishment and used in manufacturing other products made in this establishment				
			591	(B)		592	(C)	(D)	593	(E)
1	Ferrous foundries	1001 7	1	<input type="checkbox"/>	2	<input type="checkbox"/>	Short tons			
2	NONFERROUS FOUNDRIES (Except die-casting)	Aluminum	1002 5	1	<input type="checkbox"/>	2	<input type="checkbox"/>	Thousand pounds		
3		Copper	1003 3	1	<input type="checkbox"/>	2	<input type="checkbox"/>			
4		Zinc	1004 1	1	<input type="checkbox"/>	2	<input type="checkbox"/>			
5		Other	1005 8	1	<input type="checkbox"/>	2	<input type="checkbox"/>			
6	Nonferrous die-casting foundries	1006 6	1	<input type="checkbox"/>	2	<input type="checkbox"/>				
7	Precision turned products (on screw machines, turning centers, and CNC equipment)	1007 4	1	<input type="checkbox"/>	2	<input type="checkbox"/>				

Items 20 and 21 – Not applicable to this report

REMARKS – Please use this space for any explanations that may be essential in understanding your reported data.

Item 22. CERTIFICATION – This report is substantially accurate and has been prepared in accordance with instructions.

Name of person to contact regarding this report (Print or type)

Telephone

Area code

Number

Extension

Name of company

Address (Number and street, city, State, ZIP Code)

Period covered

FROM: Month

Day

Year

TO: Month

Day

Year

Signature of authorized person

Title

Date

Please photocopy this form for your records